

Abstract

[0054] A yaw stability control system (18) is enhanced to include roll stability control function for an automotive vehicle and includes a plurality of sensors (28-39) sensing the dynamic conditions of the vehicle. The sensors may include a speed sensor (20), a lateral acceleration sensor (32), a yaw rate sensor (28) and a longitudinal acceleration sensor (36). The controller (26) is coupled to the speed sensor (20), the lateral acceleration sensor (32), the yaw rate sensor (28) and a longitudinal acceleration sensor (36). The controller (26) generates both a yaw stability feedback control signal and a roll stability feedback control signal. The priority of achieving yaw stability control or roll stability control is determined through priority determination logic. If a potential rollover event is detected, the roll stability control will take the priority. The controller for roll stability control function determines a roll angle of the vehicle from the lateral acceleration sensor signal and calculates the feedback control signal based on the roll angle.